



King's Research Portal

Document Version
Peer reviewed version

[Link to publication record in King's Research Portal](#)

Citation for published version (APA):

Cassidy, A. M. (Accepted/In press). Human/wildlife conflict: an overlooked historical context for the UK's bovine TB problem. In C. M. Hill, & N. Priston (Eds.), *Human-Wildlife 'Conflicts': New Directions* Berghahn Books.

Citing this paper

Please note that where the full-text provided on King's Research Portal is the Author Accepted Manuscript or Post-Print version this may differ from the final Published version. If citing, it is advised that you check and use the publisher's definitive version for pagination, volume/issue, and date of publication details. And where the final published version is provided on the Research Portal, if citing you are again advised to check the publisher's website for any subsequent corrections.

General rights

Copyright and moral rights for the publications made accessible in the Research Portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognize and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the Research Portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the Research Portal

Take down policy

If you believe that this document breaches copyright please contact librarypure@kcl.ac.uk providing details, and we will remove access to the work immediately and investigate your claim.

Human/wildlife conflict: an overlooked historical context for the UK's bovine TB problem

Angela Cassidy

Department of History, King's College London.

Contact: angela.cassidy@kcl.ac.uk; angela.cassidy@gmail.com

Abstract

The question of whether to cull wild badgers (*Meles meles*) in order to control the spread of bovine tuberculosis (bTB) in cattle has been deeply contentious since infections in the two species were first linked in the 1970s, and is now the subject of an escalating public controversy in the UK. This chapter takes a step back from questions of animal health policy to ask instead why the idea of killing this particular wild animal provokes such intense controversy in the first place. It examines the strategic framing of badgers in recent debates over bTB in the UK media, which take two opposing forms: the 'good badger' as epitomised in Kenneth Grahame's children's novel 'The Wind in the Willows'; and the less familiar 'bad badger': carnivore, digger, and carrier of disease. The analysis then moves beyond contemporary media coverage to uncover the deeper historical and cultural roots of these representations, which date back to at least the 19th century. Long term continuities in these representations suggest that underlying the current UK bTB controversy is an older 'badger debate', about the proper relationship between humans and these wild animals. To close, the broader implications of these findings for our understanding of human-wildlife conflict will be explored, alongside the implications for current debates over bTB policy.

1.) Introduction

Since the early 1970s, the question of whether to cull wild badgers (*Meles meles*) in order to control the spread of bovine tuberculosis (bTB) infection in British cattle herds has been the source of public controversy. Bovine TB is caused by *Mycobacterium bovis*, a microorganism which can in principle infect any mammalian species including humans, although its main host is the domestic cow. In the UK *M. bovis* was a major cause of tuberculosis in humans until well into the 20th century, as it can be transmitted zoonotically via infected meat and milk in particular. The gradual recognition of this link by scientists, veterinarians and public health authorities led to the establishment of many modern systems for regulating food risks, including the pasteurisation of milk, meat inspection and routine TB testing of cattle herds (Atkins, 2000; Waddington, 2006). Due to the success of these systems, in the developed world bTB no longer poses a serious public health threat: however on a global scale it still contributes to human disease (David et al, 2010). Despite this, bTB still poses a major economic problem in the UK, as cattle testing positive for the infection are slaughtered and farmers must be compensated by government for such losses. Furthermore, herds containing infected animals are placed under movement restrictions, meaning farmers also suffer significant disruption to their livelihoods, and associated stress and emotional fallout from this disruption and the loss of their animals (Farm Crisis Network, 2009; Mort et al, 2008). Despite the near eradication of the disease by the late 1960s, bTB infection rates in British cattle slowly crept back up through the second half of the 20th C, accelerating steeply following the 2001 outbreak of foot and mouth disease (Defra, 2010). While the full reasons for this resurgence remain unclear, veterinarians and farmers point to the existence of a

'reservoir' of infection in wild badger populations as the underlying source of the problem, and have lobbied for bTB management policies to include badger culling to remove this source. At the same time, conservation and animal welfare groups have contested the importance of wildlife reservoirs, pointing instead to farming practices as a potential cause, and have campaigned against culling policies. Following a review of the scientific evidence (Krebs, 1997), the UK government commissioned the Randomised Badger Culling Trial (RBCT), designed to test the effects of badger culling on bTB rates in cattle through a systematic field trial study. After nearly ten years of intensive research carried out over about 100 KM² of the British countryside and a cost of about £50million, the multidisciplinary research team conducting the study concluded that some forms of culling appeared to facilitate the spread of bTB, and that "badger culling cannot meaningfully contribute to the future control of cattle TB in Britain" (ISG, 2007; p14). However, the RBCT findings failed to resolve the controversy, and instead these conclusions were publicly contested by veterinary and farming associations, as well as the government's own Chief Scientific Adviser at the time. We now see a situation where advocates both for and against badger culling argue that their positions are supported by 'sound science'; as have the bewildering range of policies implemented across the UK since 2008 (Spencer, 2011; Lodge and Matus, 2014).

This chapter presents findings arising from a broader programme of research investigating this situation as a case study of scientific controversy in the public sphere (e.g. Cassidy, 2006). It takes a step back from questions of animal health policy to focus instead on the wild animals at the centre of this debate. Bovine TB is a global disease problem, and several countries have both reservoirs of infection in wildlife and active culling policies without attracting the degree of public opposition experienced in the UK (More, 2009; Ryan et al, 2006). The European badger (*Meles meles*) is a member of the mustelid family (alongside weasels and otters), although historically it was often thought to be a bear of some sort. Badgers are omnivorous, nocturnal foragers which in Britain live underground in large family groups: these groups defend well defined, stable territories. Including several subspecies, *Meles meles*' range extends all the way from Spain in the west to Iran in the east; and in northern Europe up to Scandinavia (Roper, 2010). Despite the coexistence of both badgers and bTB across much of this area, it is only in the UK and the Republic of Ireland that direct causal links have been drawn between the two. This suggests that a specific combination of ecological, economic, social and cultural factors contribute to the disease ecology of bTB in these countries (Atkins and Robinson, 2013; Byrne et al, 2012; O'Connor et al, 2012; Fitzgerald and Kaneene, 2013; Roper, 2010; ch.7). Across much of Europe population densities are low and in some countries badgers are hunted animals: however in Britain and Ireland populations are thought to be much higher. In the UK and Netherlands badgers benefit from legal protections, alongside a network of local animal protection/natural history groups (Griffiths and Thomas, 1997). Despite this, in the UK these animals continue to be subject to (illegal) human practices of 'badger baiting' (fighting for sport), digging (digging out a sett and/or sending dogs in to hunt the animals), and 'control' activities from farmers and gamekeepers (Enticott, 2011a; Roper, 2010, 39-41). Alongside the similarly conflicted fox (Marvin, 2001; Woods, 2000) and otter (Allen, 2010; Syse, 2013) badgers are highly culturally significant in Britain, appearing in popular folklore, fiction, poetry and visual imagery throughout the 20th century.

This chapter draws upon research across a range of fields to ask why proposals to cull this particular wildlife species have provoked such intense and sustained controversy in this country at this particular point in time. Existing social science investigations of the UK bTB problem have focused upon animal health policy and governance (Grant, 2009; Maye et al, 2014; Spencer, 2011; Wilkinson, 2007); the roles of scientific knowledge (Enticott, 2001), farming (Enticott, 2008) and veterinary perspectives on the issue (Enticott, 2011b). Relatively little of this literature has substantially addressed the wildlife aspects of the UK bTB problem, or how the issue has played out in the broader public sphere of media and popular culture (Lodge and Matus, 2014). In common with many environmental controversies, mass media have provided a central arena for debating badgers and bTB, where the various actors involved in the controversy have engaged with wider publics alongside policymakers and politicians (Lester, 2010; 37-58). As Molloy (2011) and Corbett (2006; ch. 7) point out, animals often play important roles in developing engaging and appealing mass media content; in turn these media representations contribute to broader public discourses and understandings of animals' roles in human society. This work has also drawn upon the developing field of animal studies, where researchers working across a range of social science and humanities disciplines have investigated many aspects of human-animal relations, from pet-keeping, farming and sport through to eating (see, e.g. Buller, 2013; 2014). The animal studies literature has seen a particular emphasis on direct interactions with 'companion species' including many domesticated animals (Haraway, 2007). Therefore, this research has also drawn upon literature investigating cultural representations of wildlife (e.g. Buller, 2004; Lorimer, 2007); and discussions of human-wildlife conflict (e.g. Knight, 2000; Redpath et al, 2014; White and Ward, 2010) to understand the particular, peculiar role of the badger in British society and how this has shaped public debates over bTB.

2.) Historical and cultural framings of badgers in the UK

Epidemiological links between bTB in domestic cattle and wild badger populations were not made until 1971, when a dead badger was found on a farm in Gloucestershire which had been undergoing an anomalous outbreak of bTB (Muirhead, Gallagher and Burn, 1974). But what led the veterinarians investigating the case to make the connection and carry out a post-mortem on the carcass; furthermore what led to badger culling being adopted as a bTB management policy by 1975 (Grant, 2009)? While such questions cannot really be answered without a fuller historical investigation of this period, examining the historical and cultural roles played by badgers offers a productive start point. Contemporary human languages and cultures are saturated with representations of animals: as such they can provide a rich source of information about the roles played by animals in society at a particular place and time (Corbett, 2006; ch. 7).

Badgers were named and legally designated as 'vermin' in England under the Tudor Vermin Acts of 1532 and 1566, which listed those animals the Crown believed to interfere with human activities, particularly around food production, and offered financial rewards for their dead bodies. In this listing, badgers fetched a generous bounty of 12 old pence per head: a high price only shared by one other animal - the fox. In his study of churchwarden records of the payment of these bounties, Roger Lovegrove (2007; p230) intriguingly reports that despite this high reward, relatively few badgers were killed under this and later systems of vermin control, often implemented by landowners and gamekeepers. Traditionally, badgers were

also eaten, and parts of their bodies were used by humans (e.g. in magical charms; hair for shaving brushes; and badger fat as a liniment) (Hardy, 1975; Lovegrove, 2007). At least some of these practices continue in parts of continental Europe today (Griffiths and Thomas, 1997; Roper, 2010; p33).

This initial impression of a wildlife species with a longstanding conflict ridden relationship with humans can be confirmed by looking at how badgers are discussed in the *London Times* newspaper's online archive, which covers from 1785-1985. The earliest references found occur as part of the newspaper's routine sports reporting in the early 19th century:

EASTER MONDAY SPORTS

The first symptoms of sporting amusement that caught our observation appeared in the neighbourhood of Hampstead and Kentish-town. [...] the sportsmen of Kentish-town had assembled at the Bull and Gate, to prepare for a badger hunt; and fortified by their morning draughts, they set out for the field, not with "Deep-mouthed hounds, and mellow toned horn, but keen scented terriers, and high-bred bull-dogs, to assail the grizzly savage in his den, situated in a field between Highgate and Hampstead. (*The Times*, 1811, Apr 16; *The Times Archive*, p3, issue 8271; col C)

While the bloodsport of badger baiting was made illegal in the UK in 1835, the related practices of digging and hunting for badgers continued throughout the 19th C; and discussions of these as routine and popular activities continue in the *Times* up until as late as 1911, after which the coverage shifted towards a more modern mode of disapproval and/or concern for animal welfare.

It is not until 1877 that more positive representations of badgers started to appear, in the first of several sets of exchanges on the letters page of the newspaper.

THE BADGER' (LETTERS TO THE EDITOR)

On fine evenings we can watch them dress their fur-like coats, or do kind office for each other, and search for parasites after the manner of monkeys. No creature is more cleanly in its habits. [...] they scrape their feet in dirty weather, and keep their house inodorous by depositing their excrement at one place for many months and covering it with earth. (Ellis, 1877, Oct 24; *The Times Archive*, p5, issue 29081; col E)

This depiction of a clean, gentle, sociable and civilized animal was subsequently riposted in another letter, describing instead a vicious predatory animal which makes a persistent nuisance of itself to farmers.

BADGERS' (LETTERS TO THE EDITOR)

That badgers dig out and eat young rabbits is a fact that can be documented beyond doubt in this district during the summer months to anyone who is incredulous on the subject. [...] In the early part of this year I was told by a farmer —whose veracity I have no reason to doubt - that he had been so annoyed by badgers treading down his crops in passing from one earth to another that he determined to dig them out, so that he could trap them. (Barnes, 1877, Nov 17; *The Times Archive*, p4, issue 29102; col F)

Similar exchanges, often between amateur (and later professional) natural historians or zoologists and farmers or landowners, occurred in the *Times* every few years up until the early

1940s. As well as the above emphasis on cleanliness and sociability, in the early 20th C people who liked badgers saw them as brave, strong, family oriented, 'ancient', and quintessentially British in character.

MEN AND BADGERS' (EDITORIAL)

The badger's kin may have lived in that spot centuries before there were any human beings there. Like the best people of ancient breeding, they had kept themselves to themselves, hiding by day, coming inoffensively out by night, resisting only --and then to the death - the attempts of the upstarts and interlopers to make of them either sport or shaving-brushes. (The Times, 1927, Apr 28; *The Times Archive*, p 15, I 44567, col E)

Badgers were also lauded for making themselves 'useful' to people in many ways, particularly by eating rabbits (a major agricultural pest at the time, see Bartrip, 2008), small rodents and nuisance insects such as wasps nests. They were also considered to make excellent pets. Alongside its habits of digging and crop destruction, the badger's detractors also accused it of taking ground-nesting birds (including pheasants), chickens and even young lambs. Badgers were also considered to be a problem due to their perceived interference with foxes and by extension the elite (and economically important, see Bresalier and Worboys, 2014) practice of foxhunting:

THE BADGER: DAMAGE CAUSED IN THE HUNTING COUNTRIES' (LETTERS TO THE EDITOR)

In a hunting country, besides adding largely to the poultry claims, he does great damage by opening earths which have already been stopped. He will take possession of foxes' earths and evict the rightful owners, in many cases driving them out of the coverts with which those earths are situated. (Lascelles, 1932, Aug 31; *The Times Archive*, p6, I 46226,; col B)

Over time, these negative arguments became rarer, and this kind of correspondence gradually stopped. Badgers hardly ever appeared in *The Times* through the middle of part of the 20th century, until public campaigns to legally protect the animals got into full swing during the mid-1960s, culminating in the passing of the Badgers Act of 1973. Further legislation followed in 1992, making it a serious offence to 'kill, injure or take a badger', or to damage or interfere with a badger sett without a government issued licence (Roper, 2010).

This broad trajectory, from routinely hunted vermin animal, through societal conflict over badgers, to a valued and protected wildlife species, can also be traced in British cultural representations of badgers. In particular, it can be seen in the development of the most famous of these, Mr. Badger from Kenneth Grahame's 1908 novel *The Wind in the Willows* (WiTW) (Grahame, 1908). Grahame's book is a classic of British children's fiction: as well as undergoing multiple reprints, it has been adapted for the stage, radio and television many times and has an enduring popularity. Mr. Badger is antisocial, living in the depths of the Wild Wood: he is intelligent and wise, brave and a fierce fighter in the defence of his friends, Toad, Water Rat and Mole, whom he acts as a father figure to. Visual representations of Mr. Badger have changed over the century since the book was first published: while the earliest illustrated edition of the book, published in 1913, showed Badger and the other animals in a naturalistic style, (Graham and Branscombe, 1913), it is the anthropomorphised illustrations of E.H. Shepard, (who also illustrated A.A. Milne's *Winnie the Pooh*) which are most widely known (Grahame and Shepard, 2008). This image of Badger as country gentleman then

transformed into the stern, grandfatherly, spectacle wearing character voiced by Michael Horden in a 1980s television adaptation (Hall and Cosgrove, 1984-7); and can be seen, for example, on the cover of the current Walker Illustrated Classics edition, showing the other animals gathered around Badger in storytelling mode (Graham and Moore, 2009).

These characteristics can be traced back as far as an Anglo-Saxon riddle poem¹ dating back to the 10th century, which tells the story of an animal that lives underground in a hill, fighting and defending his family against digging invaders (Nelson, 1975). The theme was picked up by the British romantic poet John Clare during the early 19th C. in his vividly written poem *Badger*² - written from the point of view of the animal being baited (Clare, unknown; 2006)² - and was reprised by the famous First World War poet Edward Thomas in *The Combe* (1917). Following *Wind in the Willows*, a more academic, less heroic version of the character appears in T.H. White's *The Sword in the Stone* (1938), a children's novel about the young King Arthur, while more martial versions can be seen in CS Lewis' Narnia novel *Prince Caspian* (1951), and fantasy author Brian Jacques' *Redwall* series (1986-2010; e.g. Jacques, 1988). Colin Dann's *Animals of Farthing Wood* series (1979-1994; e.g. Dann, 1979) reinterpreted the character with a more environmental angle: Badger became a leader of a group of animals evicted from their home woodland by a housing development: this series was also turned into a children's animation during the 1980s. While this environmental angle became more explicit at this time, these sources all shared a common theme of reflection on human relationships with the British natural environment and countryside.

Another aspect of Badger's character can be seen in the association of badgers not only with British national identity in general, but also with the idea of rootedness and a specific sense of place. This can be seen in the usage of 'badger' or older, reputedly 'Celtic' names such as 'brock' in place names (e.g. Broxbourne). Badgers also feature in real coats of arms (fig. 1), the fictional heraldry of J.K.Rowling's *Harry Potter* books (e.g. Rowling, 1997), and 'heraldic' commercial imagery such as that employed by the Dorset based Hall and Woodhouse brewery chain (brewers of 'Badger' branded beer). These kinds of deep-rooted connection between animals, place, landscape and British national culture have also been documented for several other wildlife species, including foxes (Marvin, 2001), otters (Syse, 2014) and wild birds (Moss, 2004; Cammack et al, 2011).



Figure One: traditional coat of arms and modern corporate logo of the UK borough of Broxbourne, located in the South East of the country (reproduced by kind permission of Broxbourne Borough Council).

Badgers have also played a significant role in histories of popular natural history and zoology in the UK from the mid 20thC onwards. *The Badger* (1948) was one of the earliest publications in the influential Collins *New Naturalists* book series (Marren, 1995). As the write-up of one of the first systematic field studies of badgers, *The Badger* acted simultaneously as a major scientific monograph, as well as an exceptionally popular natural history book of the post-war period. It was republished as a mass print Pelican paperback in 1958 and subsequently stayed in print until 1977. Its author, Ernest Neal, worked as a schoolmaster, but was also a pioneer of nature photography, capturing the earliest still colour and video film footage of wild badgers.³ Via this work, he became closely involved in the early development of the BBC Natural History Unit, (Marren, 1995; Neal, 1994), and thereby played a role in the mutual constitution of wildlife documentary and the sciences of animal behaviour during the 20th century (Davies, 2000). He worked in collaboration with amateur natural historians and professional zoologists, having a profound influence on subsequent research in field biology (Roper, 2010), and influenced policy via membership of the Badger Consultative Panel for many years (Neal, 1994). *The Badger* (1948) is a compelling combination of scientific monograph, firsthand narrative, and 'how to' manual for the aspiring amateur natural historian, clearly explaining how to conduct your own field studies of badgers if you should so wish. It describes badgers as clever, sociable, clean, civilised, and family oriented animals: terms immediately familiar from the above discussions in the *Times*.

In more recent popular cultural contexts, badgers have become increasingly abstracted: they often appear as part of a revolving cast of what Tess Cosslett describes as "human beings with animal heads" (2006; p181) in children's TV and books: essentially stories about humans (usually children) who act as humans, but just happen to be depicted as animals. Particularly since the 1990s, this tendency towards abstraction has accelerated into surrealism and comedy, with even the word 'badger' being seen as simply funny, featuring in wordplay and stand-up comedy routines in the UK.⁴ Badgers have even had their own Internet craze: the *BadgerBadgerBadger* animation, which simply involves animated badgers doing star jumps,

followed by a mushroom and a snake, to the accompaniment of a catchy tune (Picking, 2003). It is clear that in these contexts the badger's strikingly striped, monochrome face plays an important role. Indeed, visual representations of badgers often appear: from coats of arms through commercial and campaign logos, book illustrations, nature photography and documentary, visual arts, television programmes, and of course countless soft toys. The face lends itself to abstraction, and is adopted beyond badger-specific issues into broader environmental and conservation campaigning, as can be seen in this logo of a British national conservation NGO (fig. 2).⁵



Figure Two: Logo of the UK Wildlife Trusts (reproduced by kind permission of the Wildlife Trusts)

These highly positive images and ideas stand in sharp contrast to one of the few negative portrayals of badgers in British popular culture: Beatrix Potter's *The Tale of Mr. Tod* (1912). Like Kenneth Grahame, Beatrix Potter wrote children's books in the first decades of the 20th C, similarly featuring humanised, clothed animals adventuring across a specifically English countryside. Unlike Grahame, whose work tended towards the allegorical and surreal, Potter's many animal Tales were intended to teach children basic biology and natural history (Cosslett, 2006). Famously, Potter even upbraided Grahame for his lack of realism when portraying animals:

...did he not describe Toad as combing his hair? A mistake to fly in the face of nature — A frog may wear galoshes; but I don't hold with toads having beards or wigs! (Potter, 1942 in Potter and Taylor, 2012)

To modern eyes, *The Tale of Mr. Tod* is a grim (but very biological) tale of predation: the badger, Tommy Brock, uses guile to kidnap a nest of baby rabbits, which are then in turn stolen from him by the fox, Mr. Tod. The two fight, and in the confusion the babies' relatives (Peter Rabbit and Benjamin Bunny) manage to rescue them. While Potter's claims to realism are clearly somewhat overstated, badgers do indeed predate on young rabbits by digging them out of their protective burrows. While this behaviour is well-known by biologists (Roper, p116-120) it caused a minor sensation when accidentally recorded by BBC cameramen during the 'reality TV' natural history series *Springwatch* several years ago (Scoones, 2009). Potter's Tommy Brock is a deeply unpleasant character, who as well as being sly and predatory is smelly, dirty, uncouth, and carries a spade (much like baiters and diggers), as seen in Figure Two. He is also portrayed as an agricultural labourer (fig. 3) in contrast to

the 'gentleman' Mr. Tod, the fox. This reflects the class politics of animal hunting in the UK. While foxhunting was developed by the landed gentry during the 19th century into an iconic feature of British country life (Marvin, 2001); and otter hunting was associated with a broader spread of participants including the middle classes (Allan, 2010); with some overlaps, badger hunting and baiting in particular were and still are associated with working class people (Griffin, 2007; p84-5).



Figure 3: 'Tommy Brock', Illustration from *The Tale of Mr Tod* by Beatrix Potter (1912, p21) (Copyright © Frederick Warne & Co. 1912, 2002; Reproduced by permission of Frederick Warne & Co.)

3.) Framings of badgers in the contemporary bTB debate

Having surveyed the roles played by badgers in British historical and cultural sources, we now return to the contemporary bTB controversy. How have badgers been framed in mass media covering and contributing to these debates, and are there any commonalities or continuities to be found with earlier representations of the animals? The principle data source for this analysis has been the LexisNexis UK national newspaper online archive, which was searched over the period 1995-2010, for 'badger' and 'TB'. This produced a core sample of newspaper articles, which were analysed using grounded theory (e.g. Strauss and Corbin, 1998) - an iterative process of questioning, reading and qualitative coding, which continued until the analysis stabilised. The core sample was then supplemented with material from online sources, social media, specialist agricultural press, parliamentary proceedings, government publications and relevant TV and radio programmes. Framing analysis, a widely used methodology for media analysis, was also employed to investigate how actors involved in the debate have understood the problem and what should be done about it. This coverage has

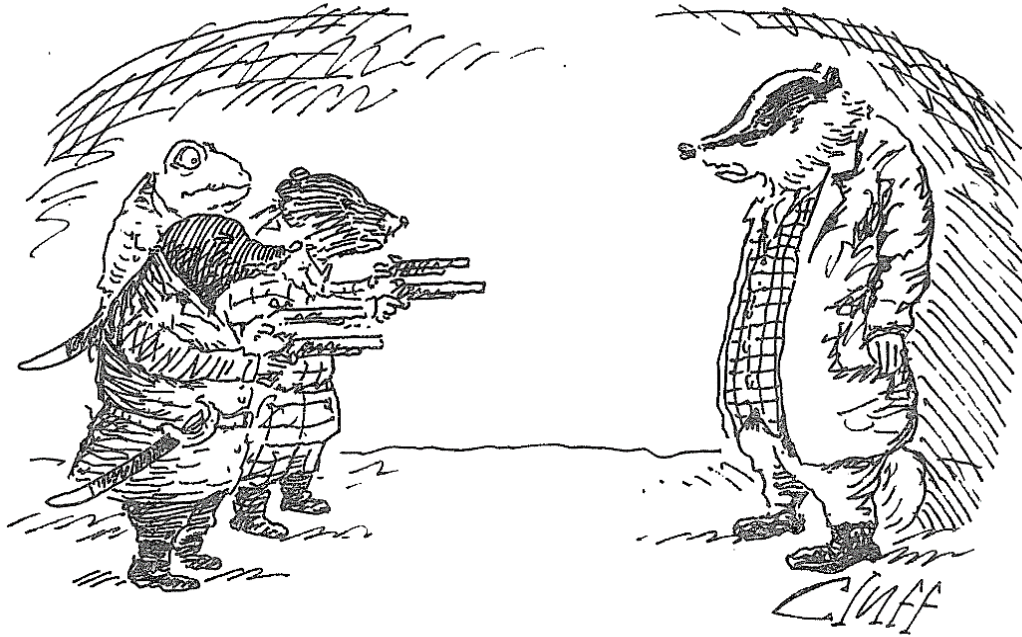
had a very tight focus on badgers and the associated question of whether they should be culled, with less attention paid to other factors involved in the bTB issue such as cattle movement, farming practices or bTB testing regimes. The issue was also framed in one of two ways: either bTB as a chronic agricultural problem, or badger culling as a potential environmental risk. For many British people, it is likely that their first (or only) encounter with this famously nocturnal and retiring animal is via the fictional and popular cultural sources described above. Fictional badgers have therefore played a central role in this process by providing journalists with a series of easily recognisable 'hooks' from which a complex and relatively obscure science/policy issue could be discussed without losing audiences' (and editors') interest in the story. These contemporary representations take the form of 'good' and 'bad' badgers, broadly corresponding with the environmental and agricultural framings of the bTB problem; but also displaying some striking continuities with the historical and cultural sources described above.

'Good Badger'

While *The Wind in the Willows* (WitW) was not the only cultural source to be referenced, it was by far the most prominent and frequently mentioned one. WitW's status as a touchstone reference point in the bTB controversy is illustrated well by the satirical cartoon reproduced in Fig. 4, which *Private Eye* magazine published when the Coalition government announced their culling policy. 'Mr. Badger' was referenced, directly or indirectly, during discussions of the good features of badgers and/or why they should not be culled. These 'good badgers' were often described as being mysterious/shy/averse to (human) social contact; intelligent/wise; and a brave or strong fighter when attacked:

SUPER FURRY ANIMAL OR CATTLE-KILLING, TB-RIDDEN VERMIN?

'People don't just love them because they are cuddly, but because they are so full of mystery. You see the size of their claws, and their teeth, and how quick they are, you don't want to mess with them – I suppose that was the challenge for badger baiters' (Adams, 2008, May 4; *Observer Magazine*, p24)



*"It's nothing personal, Badger, it's just that
we've been paid to cull you"*

Figure 4: *Private Eye*, Issue 1272, 14th October 2010, p18 (reproduced by kind permission of PRIVATE EYE magazine / John Longstaff)

When people do encounter badgers in the wild, this seems to confer a special sense of connection with wildlife and the natural world:

IF YOU GO DOWN TO THE WOODS TODAY

The first time a young badger bounced down the garden to greet me, I felt a flush of pride. Presumably it had mistaken me in the dark for a fellow badger - it bolted the second it realised its error. But it was still gratifying, as if its' snuffling at my feet conferred some kind of seal of approval from the natural world. (Askwith, 2003, June 13; *The Independent*)

The relative rarity for some people of experiencing such connections may in part account for the popularity of 'badger watching' as a leisure activity in the UK.⁶ While people rarely encounter badgers by accident, due to their nocturnal lifestyle, a combination of poor eyesight, routine foraging habits, and an omnivorous diet means that given the right conditions it can be relatively easy for an amateur to seek out and observe them.⁷ This happens along a continuum with people feeding badgers visiting their gardens on an ad hoc basis at one end, and organised holiday breaks at the other.

TEA FOR TWO, PLEASE

"SAT under a beech tree in the cow field behind the cottage and waited," reads an entry in the visitors' book at Westley Farm in the Cotswolds. "At about 9.20pm a large badger came across the field towards me. He came up to the tree and sniffed around the roots on which I was sitting. Wow! Then something I will never forget - he sniffed at the leg of my jeans, stopped, looked up, our eyes met." (Ellis, 2002, 6 July; *The Times (Weekend)*, p6)

While initially it seems contradictory for dairy farmers (often hard-pressed due to bTB) turning to people's love of badgers as an alternative income source, this coverage suggests that farming attitudes to the badger/bTB situation may be more variable than the stereotype:

There is irony in the badger becoming a farm's best friend, particularly in Gloucestershire, where the incidence of bovine TB has been relatively high. "Many farmers are terrified of TB and are anti-badger," Julian says. "But not the small farms in this valley." The Usbornes believe that wider issues, such as feed, animal husbandry and cattle controls, need to be explored. Why, they ask, are some herds free of TB while others in the same area are infected? (Ellis, 2002, 6 July; *The Times (Weekend)*, p606)

As described above in relation to their appearances in place-names and heraldry, British badgers' habit of living in family groups in the same place over the long term is linked to descriptions of 'good badgers' as animals with intimate and longstanding connections with the land, a 'native' species, therefore ancient, and highly symbolic of British national identity.

LEADING ARTICLE: IN PRAISE OF... BADGERS

"The most ancient Briton of English beasts," wrote the poet Edward Thomas of the badger, a justified verdict on a black-and-white creature that has always added colour to the nation's life. The appearance of one sett in the Domesday Book merely marks the start of the current chapter in a tale stretching back a quarter of a million years. Despite their elusive nature, their inquisitive face is still one of the most recognisable symbols of British wildlife. (Guardian Leader, 2007, May 15; *The Guardian*, p28)

This is often underlined by pointing out connections with place names, terms such as brock and Briton; and attributions of age and gender ('Mr.' or 'Old' Brock). As the above quote suggests, this national symbolism is closely connected to ideas about a specifically British form of wildlife/countryside/nature. Despite their clear co-existence in human spaces (farms, gardens), 'good badgers' tend to be discussed as if they spend most of their time in the 'natural' space of the Wild Wood.

An overlapping, but distinct set of characteristics involves discussions of badgers as sociable (with other badgers), family oriented, and with evocatively humanlike characteristics.⁸

TB OR NOT TB?

They have young ones to feed at this time of year, ablutions to perform and family grooming duties, as well as house cleaning and repairs to do. It is a furiously hectic life below ground. In fact, on still frosty nights you can see a plume of steam lifting from an air vent built by the badgers at the back of their sett, like the warm white billows drifting upwards from sidewalks above the New York subway. And these animals are our deadly enemy? (Mitchell, 2006, Mar 4; *Daily Telegraph(Weekend)*,p1)

Although badgers are omnivores, whose diet includes small mammals (including baby rabbits and hedgehogs), birds, and eggs, 'good badger' framings tend to emphasise the more innocuous aspects of this diet such as worms, insects, snails and nuts:

BLACK AND WHITE AND BRED ALL OVER

On a good night, badgers suck worms out of the ground just like children eat spaghetti.
(Beardsall, 2003, Aug 9; *Daily Telegraph*, p12)

Unsurprisingly, framings of badgers as victims (of humans) have been particularly prominent in this coverage, directly referencing the continuing practices of baiting and digging. At times, the 'badger as victim' framing places these practices into a broader context of historical relations between humans and wildlife in general:

STOP PICKING ON MR BROCK: IT'S THE SILLY COW WITH TB YOU SHOULD BE BLAMING
Death is always the soft option -at least, it is for those not doing the actual dying. The badger cull is all of a piece with the slaughter of predators that was all the rage in the 19th century and still continues in some places, illegally, today. When in doubt, blame a wild creature; and then kill it. Job done. (Barnes, 2006, Oct 7; *The Times*, p23)

Finally, the badger as victim is discussed in unambiguously human terms, placing the reader directly into the shoes (paws?) of animals facing death from impersonal authorities. This is particularly clear in emotive newspaper headlines such as 'The Culling Fields' (Independent Leader, 2005, p30), descriptions of culling as 'mass slaughter', and references to past culls and gassing: immediately evoking the (human) horrors and holocausts of the twentieth century.

TB OR NOT TB?

There must be an immediate "blitz cull" of as many as 100,000 badgers - massed gassings, total elimination zones extending across swathes of Devon, Somerset, Cornwall and any other seriously affected county. No more waiting. Push the red button. Do it now.
(Mitchell, 2006, March 4; *Daily Telegraph (Weekend)*, p1)

This 'victim' mode is underlined by depictions of badgers as female, as children, or likening their situation to that of refugees:

MOTHER BADGERS ARE SNARED IN RUSTY CAGES, PARTED FROM THEIR SCREAMING CUBS AND COLDLY SHOT IN THE HEAD... ALL WITH THE GOVERNMENT'S BLESSING
TRAPPED in a small, rusting cage this despairing badger paws at the bars and pushes her snout through the bars as she struggles to escape. Somewhere in the darkness a cub screams for its mother. (Weathers, 2003, June 3; *Daily Mail*, p11)

A CULL BY ROYAL APPOINTMENT

A cull - by its nature incomplete - "would have a profound effect on the lifestyle of survivors. It might well cause changes in their immune systems which make them less resistant to disease. With their society in turmoil, bereaved badgers would almost certainly traverse the country far and wide, infecting more badgers and more cattle."(Hattersley, 2005, Dec 22; *The Times*, p18)

This set of discourses, framing badger culling in terms of human war and the victims of war, provides an interesting appropriation and reversal of a set of widely used metaphors of 'the battle against disease' (Nerlich and James, 2009). Rather than utilising the bellicose language of waging war, it instead invokes anti-war rhetoric to draw attention to the potential consequences for badgers of 'eradicating' bTB.

'Bad Badger'

Given the prevalence of positive cultural representations compared to the single negative example of *The Tale of Mr Tod*, it is striking that in contemporary media coverage of badger/bTB, negative framings of badgers are not just prominent but considerably outnumber discussions of the 'good badger'. Most obviously 'bad badgers' spread disease by transmitting bTB to domestic cattle, and potentially to humans:

BADGER THE GOVERNMENT

Until it was brought under control in the 1960s, TB was a serious danger in Britain. So there is cause for concern that, in the past decade, cases of this disease in cattle have soared. An expanding badger population is blamed. These animals carry TB though they themselves appear unaffected by it. One mouthful of grass on which a diseased badger has urinated is believed to carry sufficient tubercle bacilli to infect a cow. The worry is that humans could contract the illness through consuming unpasteurised milk products. (*The Times*, 1999, May 5)

In contrast to the humanlike 'good badger', 'bad badgers' tend to be discussed in the plural, and in a depersonalised way. This plays into discussion of links between rising badger populations and disease spread (Veterinary Association for Wildlife Management, 2010)

In turn, this forms part of a complex of characteristics depicting badgers as an undesirable underclass: violent, disruptive, criminal and far too numerous.

INSIDE STORY: WHAT HAVE I DONE TO DESERVE THIS?

In the book [*WiTW*], Badger is a solitary creature. Round here, he'll be shackled up with a dozen friends and family. And quite likely, he'll have tuberculosis. (Perkins, 1999, Apr 12; *The Guardian*, p8)

SUPER FURRY ANIMAL OR CATTLE-KILLING, TB-RIDDEN VERMIN?

As the badger population has grown, they are increasingly in our back yards; as Colin Gray points out, just as we had urban foxes, increasingly we will be seeing urban badgers as they travel further in search of food. In some places this is already a reality. In Evesham last year, 'a rogue badger attacked five people during a 48-hour rampage in a quiet suburb'. In one suburb in Sheffield, it was recently reported, residents 'were demanding an Asbo for sex-mad badgers'. There were 19 setts in a hundred yards of back gardens. Michael Broomhead, 60, a retired butcher, said: 'They have felled three trees by digging under them. When they are having sex they howl and scream, and when they are fighting they make terrible bloodcurdling noises as if they are being murdered.' (Adams, 2008, May 4; *Observer Magazine*, p24)

While violence, or the capacity for violence when under attack, is present in the 'good badger', here we see badgers' predatory and violent behaviour being greatly accentuated:

CULL OR CURE DILEMMA AS BADGERS GET BLAME FOR EPIDEMIC

Ground-nesting birds have also suffered in the explosion of badger numbers, according to Mr Barker[a dairy farmer]. He believes there could be up to 50 badgers in the main sett alone. "I now have no lapwings, curlews or wild pheasants because there are so many badgers searching for food and taking all the eggs in the spring." (Goodwin, 1997, Dec 1; *The Independent*, p20)

Other negative (or disruptive to humans) aspects of badger behaviour are also emphasised, such as crop destruction and digging. Badgers live in underground setts, continually dig and are opportunistic, intelligent omnivores: therefore such activities bring them into conflict with humans at times (Roper, 2010; 267-298).

THOUSANDS OF BADGERS ARE CONDEMNED TO DIE OVER TB FEARS

Farmers detest the nocturnal mammals not only because of the belief that they spread TB but because they flatten cereal crops, nibble growing corn on the cob, and even strip vineyards of grapes. (Hinsliff, 1998, Aug 18; *Daily Mail*, p21)

THE SMART SETT

Aberdeenshire council is spending pounds 30,000 on a new council home for a family of badgers because their present sett has undermined a main road between Huntly and Banff. (*Daily Telegraph*, 2001, Mar 21; p25)

In the 'bad badger' framing, these features come together to depict an agent of chaos – and, due to legal protections, one which can escape 'justice':

A VERMINOUS VIETCONG STALKS THE COUNTRYSIDE

Not since the Beast of Bodmin, not since the Hound of the Baskervilles, had so awful a creature plagued the countryside. *Meles vulgaris*, something between a weasel and a bear, was overrunning hill and dale. And it was, of course, Labour's fault. What were the teddy-hugging, town-dwelling, pizza-eating classes going to do about it, I was asked? They would not be content until every rustic parlour was a zoo of free-range foxes, badgers, stags, kites and predatory geese? I could not argue the damage. Across the landscape meadows were being upheaved, hedges, banks and bridleways subsiding, tennis courts falling into holes. Tunnels of Ho Chi Minh ingenuity were sapping the ancient walls and lawns of England with a verminous Vietcong. These omnivorous monsters were eating lambs and ground-nesting birds. They were the only known predator of the hedgehog. Archaeological sites were being destroyed. The killer brock was prowling at will, cockily secure under the 1992 Protection of Badgers Act. (Jenkins, 2004, Apr 4; *The Times*, p24)

While this piece, in common with much newspaper commentary, is clearly meant to be humorous, it still expresses a common frustration with the legal protection of badgers in the UK. It also illustrates how controversies over badger culling are intertwined with tensions between traditional British rural centres of power and modern urban elites - at the time epitomised by successive Labour administrations. During their time in power (from 1997-2010), as well as gradually withdrawing licences for farmers to cull badgers, and ruling out a culling policy in 2008, the Labour government also outlawed foxhunting in 2005 (Woods, 2008). While the specifics of foxhunting controversies are distinct to those surrounding badger culling and baiting/digging (Marvin, 2000) common intersections of power and political interests result in their present alignment (e.g. May, 2010)

These 'good' and 'bad' badger framings are employed strategically by media and other actors engaged in arguments for and against culling policies. However, as is suggested by some of the examples above, each trope is also employed, albeit in an exaggerated form by the 'other' side as well, for example when pro-cull actors cite *Wind in the Willows* as the source of 'emotional' popular resistance to culling (Tasker, 2012). Indeed, in some longer articles,

authors switch rapidly between the two tropes, using them as a resource to explore the issue at depth. Grant (2009) and Enticott (2011b) also identify the use of good/bad badger tropes, respectively by policymakers during the 1960s and 1970s; and farmers currently affected by bTB carrying out illegal culling. However, these take a slightly different form, involving the attribution of bTB infection/spread to specific individuals: sick 'rogue badgers' whose behaviour is abnormal in many ways and must be 'taken care of' (Enticott, 2011b; 204; Maye et al, 2014: see also Jenkins, 2004, quoted above). This trope was rarely present in national press coverage of badger/bTB, although the related idea of expressing concern for the suffering of sick badgers was employed as part of pro-cull rhetoric:

ANIMAL LOBBY CONDEMNS BADGERS TO SLOW DEATH

It [bTB] is also causing great suffering to the badgers themselves. Thousands die each week from the long-drawn-out effects of the disease (unless, as any West Country roadside bears witness, they are so weakened that they fall victim to a passing vehicle). (Brooker, 2005, Mar 7; *The Daily Telegraph*, p14)

This illustrates the flexibility of good/bad badger discourses, and the ways in which they can be taken up and strategically reshaped to suit changing contexts and audiences. While the link with TB is new, the association of the 'bad badger' with dirt and solitary, violent behaviour is evident in Beatrix Potter's Tommy Brock, created nearly 100 years earlier.

4.) Discussion

This chapter has traced how badgers have been represented in British society via an analysis of historical and cultural sources, alongside media coverage of contemporary debates over bovine TB and badger culling. Across all these sources, two opposing characters dominate: the 'bad badger' and the 'good badger', which today are broadly associated with arguments for and against culling policies for bTB management. This analysis suggests that badgers have occupied an ambivalent position in British society since at least the mid-19thC, although it is far from a comprehensive historical investigation of the issue. Various aspects of badger behaviour bring these animals into conflict with humans: on the other hand they have a range of other characteristics which people have found admirable and aesthetically pleasing. Some of these, such as strength, bravery and loyalty to family, are features which may be displayed during baiting and digging activities: this valorisation of and sense of closeness to the 'hunted' animal by the 'hunter' is not unusual (Marvin, 2000; Carvalhede Reis, 2009). Through longstanding British cultural traditions inspired by nature and the countryside, as well as in more recent traditions of popular natural history, badgers are widely regarded as "charismatic wildlife" in the UK (Lorimer, 2007). Charismatic animals such as the panda are often used in conservation campaigning: the fact that in the UK badgers take on such a role despite not being an endangered species attests to the strength of this status, and may go some way towards explaining the strength of opposition to badger culling in the UK (Bennett and Willis, 2008; Defra, 2011).

At the same time, many of the characteristics of the 'bad badger' highlight how these animals can come into conflict with humans. Alongside the obvious issue of bTB transmission, these include crop-raiding, predation, violence and disruptive digging. Such descriptions are congruent with the kinds of language used to describe animals in conflict with humans across

a wide variety of species, cultures and locales: such animals are often ascribed to the category 'pest' or 'vermin'. Knight's (2000b) framework of 'pestilence discourses', in which pest animals tend to be represented as dirty, violent, criminal, cunning, numerous and out of control, while their harmful effects upon humans are emphasised, fits well with these negative framings of badgers.¹² This is also apparent in the transition from debates about badgers to debates about badgers and bTB. The historian Mary Fissell (1999) has argued that the category 'vermin' in early modern England related to animals in direct competition with humans for resources, which could explain why badgers and other vermin animals were (and are) frequently portrayed (and treated as) criminals (see, e.g. Cassidy and Mills, 2012). Fissell also argued that early modern 'vermin' were not associated with dirt, disease and disgust as they are today, and that these links later developed alongside the adoption of germ theory during the 19th century (Douglas, 1966). Cole (2010) draws upon 16th and 17th century accounts of the plague to instead argue that vermin *were* associated with disease at this time, but via an intertwined complex of natural and supernatural causes including miasma (bad air) and witchcraft.

As discussed above, badgers were not directly connected with bovine TB until the early 1970s, and as we have seen here, historical and contemporary representations of the 'bad badger' have tended to focus more on their role as agricultural pests than as disease carriers. Therefore, contemporary associations between badgers and bovine TB appear to be facilitated by *both* historical understandings of badgers as vermin in competition and conflict with humans, and by modern scientific understandings of vermin as disease vectors. Recent research on societal representations of disease supports this idea: we see a common language of war, apocalypse, the enclosure of safe space (biosecurity) and attributions of risk outside such spaces across a range of cases including foot and mouth disease, 'superbugs', pandemic influenza and bTB (Nerlich and James, 2009; Nerlich, Brown and Wright, 2009; Washer, 2010). This includes the 'othering', dehumanisation and exclusion of groups and individuals seen as the source of disease risks (Joffe, 1999). In this case, badgers have been treated in much the same way, transferring societal anxieties about disease risks onto an animal species: these associations between 'vermin', disease anxieties, prejudice and excluded groups have been applied to humans and other animals alike (Marcu, Lyons, and Hegarty, 2007; Mavhunga, 2011). It is also possible that this is part of a broader escalation of risk narratives around animals in European media and popular culture in recent years (Gerber et al 2011).

Knight (2000b) also highlights the dualistic nature of pestilence discourses. This is very much in evidence in the material presented here, as are the ways in which 'pest' animals tend to disrupt the spatial, bodily or psychological boundaries constantly being constructed between humans and other animals, as well as 'culture' and 'nature'. As described above, these framings of badgers invoke important notions of space, and the proper occupation of space. The 'good badger' is symbolic of an idealised British nature or countryside, and as such is often depicted occupying 'natural', nonhuman spaces such as Kenneth Grahame's 'Wild Wood'. By contrast, 'bad badgers' are invariably framed as intruders into human, albeit agricultural, spaces where they disrupt and impede human activities (see also Spencer, 2010). The constructed nature of these boundaries, and the way in which they must constantly be (re)negotiated (Schlich et al, 2009) means that the 'pest' role is inherently ambiguous. This explains why constructions of pests are likely to flip between positive and negative versions,

particularly when such boundaries are being contested (e.g. Brown, 2011; Cassidy and Mills, 2012; Hytten, 2009; Potts, 2009).

By comparing contemporary public debates over badgers and bTB with older media and cultural representations of badgers in the UK, a tentative historical narrative can be traced. From an early period in which badgers were legally considered to be vermin (albeit occasionally admired), during the late 19th and early 20th century the 'good badger' seems to have appeared and gradually become more prominent. During this period, the emergence of early animal welfare movements and resulting changes in social attitudes gradually marginalised, and eventually outlawed common interactions with badgers via baiting and digging (Griffin, 2007). The first two decades of the 20th century seem to have been a turning point of sorts: while it may be a coincidence that *WitW*, *The Combe* and *Tales of Mr. Tod* were all published during this period, the British anti-bloodsports movement also emerged during this time (Allan, 2010; p81). After this, positive representations of badgers became increasingly common. By the late 20th C the 'good badger' became so dominant that it became increasingly abstracted and even parodied, to the point that the 'surreal badger' has been mobilised several times recently in the contemporary culling controversy.⁹

Today's controversy over badgers and bTB can therefore be read as a continuation of this longstanding 'badger debate' about the appropriate position of these animals in British society. Are badgers pests to be 'managed' and removed when they get in our way; or a cherished, charismatic wildlife species to be preserved and protected? Contemporary associations between disease, risk and animals (particularly pests) also appear to have contributed to the re-emergence of the 'bad badger' into public discourse in the UK.¹⁰ These deep rooted connections suggest that a deeper understanding of many other contemporary conflicts between humans and wildlife can be gained by investigating the historical development of such conflicts, and how cultural representations of the animals involved have changed over time.

These findings have two key implications for current debates over the management of bovine TB in the UK. Firstly, there is a pressing need to reframe the public controversy beyond the reductive yes/no question of badger culling, and to 'open up' (Leach, Scoones and Stirling, 2010; Stirling, 2008) broader questions surrounding the underlying and highly complex problem of bTB spread, its potential causes, and what can and should be done about it. A key first step would be to acknowledge the existence of the historical 'badger debate' underlying the bTB controversy, and take steps to investigate and address the potential problems of human/badger conflict that are *not* about bTB. Secondly, as research on the disease ecology of badgers and bTB is increasingly recognising (Byrne et al, 2013; O'Connor et al, 2012), human cultures, histories, politics, ethics, economics and actions play important roles in maintaining and spreading the disease across multiple species. To improve our understanding of how bovine TB works, and how it might best be managed, we need to investigate the multiple social and biological causes of this chronic disease problem together. Only then can we hope to find any potential resolution of this protracted and divisive controversy, which has yet to find a satisfactory solution for any of the humans or other animals involved in this country.

Notes

- ¹ The nature of the poem is such that the animal is never identified, but it has popularly been considered to be a badger: for arguments to the contrary, see Bitterli (2007).
- ² Alongside other Romantic poets, Clare's work expressed and was important in shaping the incipient animal rights movement in Britain: see Perkins (2003) for a more in-depth discussion.
- ³ The cover of Neal's autobiography (Neal, 1994) references this work and the cultural role of the badger by depicting the animal in schoolmaster's robes.
- ⁴ See, e.g., material by the British comedians Eddie Izzard, Marcus Brigstocke and Harry Hill.
- ⁵ I understand that part of the reason for the adoption of the badger face as the logo for the UK Wildlife Trusts is that the simple monochrome image could be easily copied using the scarce resources available to NGO campaigners at the time (Owain Jones, pers. comm.); see also Nicholls (2011) for the role of visual abstraction of animal images in conservation logos.
- ⁶ Many of the UK Wildlife Trusts, as well as local landowners and farmers now conduct supervised or unsupervised 'badger watching' on a routine and frequently commercial basis: see, e.g. <http://www.badger.org.uk/content/Living.asp> for listings, and <http://www.badgerwatch.com/> for a lay perspective on the practice.
- ⁷ This contrasts with the notorious difficulties of 'seeing' or indeed studying many wild animals (Rees, 2006). Similarly, the relative visibility of birds plays an important role in the popularity of bird watching as a leisure activity (see Cammack et al, 2011; Law and Lynch, 1988; Moss, 2004).
- ⁸ I generally avoid the term 'anthropomorphic', as it seems too normatively loaded to be helpful in understanding how and why people tend to highlight the similarities between themselves and other animals in this way (see Daston and Mitman, 2005) for further discussion of this issue)
- ⁹ In 2013 the rock star Brian May (funder of the anti-cull *Save Me* campaign) teamed up with the makers of *BadgerBadgerBadger* to create a Save the Badger web animation (Picking, May and Blessed, 2013); see also the widespread lampooning of the then Environment Secretary's comments that "the badgers have moved the goalposts" later that year (Political Scrapbook, 2013).
- ¹⁰ While it is far beyond the scope of this article to draw direct links between this re-emergence and changes in human attitudes or practices towards badgers, Enticott (2011b) suggests that the severity of the bTB problem (and farmers' lack of power to prevent it) may be leading to an increase in illicit persecution and killing of badgers.

Acknowledgements

A version of this chapter was originally published as Cassidy, A. (2012). Vermin, Victims and Disease: UK framings of badgers in and beyond the bovine TB controversy. *Sociologia Ruralis*, 52(2), 192–204.

The research leading to this chapter was initially carried out with the support of an Interdisciplinary Early Career Fellowship from the UK Rural Economy and Land Use Programme (grant no. RES-229-27-0007-A); and further developed with the support of a Medical Humanities Fellowship from Wellcome Trust (101540/Z/13/Z). I would like to acknowledge the contribution of Charlotte Kenten to the early stages of this research, and thank my various Fellowship mentors, particularly Abigail Woods, Peter Simmons, Graeme Medley and Robbie Macdonald for their feedback and support in developing this work.

References

- Adams, T. (2008, May 4) Super furry animal or cattle-killing, TB-ridden vermin? *Observer Magazine*, p24
- Allen, D. (2010) *Otter*. (London: Reaktion Books).
- Askwith, J. (2003, June 13) If You Go Down To The Woods Today. To some, they're charming, gentle creatures. To others, they're a menace. *The Independent*.

- Atkins, P.J. (2000) Milk consumption and tuberculosis in Britain, 1850-1950. In: Fenton, A. (ed) *Order and disorder: the health implications of eating and drinking in the nineteenth and twentieth centuries*. Tuckwell Pres.,
- Atkins, P. J., & Robinson, P. A. (2013). Coalition culls and zoonotic ontologies. *Environment and Planning A*, 45(6), 1372–1386.
- Barnes, G. (1877, Nov 17) 'Badgers' (Letters to the Editor). *The Times Archive*, p4, issue 29102, col F.
- Barnes, J. (2006, Oct 7) Stop Picking on Mr Brock: it's the silly cow with TB you should be blaming. *The Times*, p23.
- Bartrip, P. W. J. (2008). *Myxomatosis: A History of Pest Control and the Rabbit* I.B.Tauris.
- Beardsall, J. (2003, Aug 9) Black and white and bred all over. Thanks to dairy farming, badgers are thriving in areas such as Somerset, says Jonny Beardsall. *Daily Telegraph*, p12
- Bennett, R. M., and K. G. Willis (2008) Public values for badgers, bovine TB reduction and management strategies. *Journal of Environmental Planning and Management* 51(2) pp. 511-523
- Bitterli, D. (2007) Exeter book riddle 15: some points for the porcupine. *Anglia - Zeitschrift für englische Philologie* 120(4) pp. 461-87
- Bresalier, M., & Worboys, M. (2014). 'Saving the lives of our dogs': the development of canine distemper vaccine in interwar Britain. *The British Journal for the History of Science*, 47(02), 305-334
- Brooker, C. (2005, Mar 7) 'Animal lobby condemns badgers to slow death. TB EPIDEMIC. Notebook' *The Daily Telegraph*, p14.
- Brown, K. (2011). Rabid epidemiologies: the emergence and resurgence of rabies in twentieth century South Africa. *Journal of the history of biology*, 44(1), 81–101.
- Byrne, A., Sleeman, D.P., O'Keefe, J. and Davenport, J. (2012) The ecology of the European badger (*Meles meles*) in Ireland: a review. *Biology and Environment: Proceedings of the Royal Irish Academy*, 112B: 69-96.
- Buller, H. (2004). Where the wild things are: the evolving iconography of rural fauna. *Journal of Rural Studies*, 20(2), 131–141.
- Buller, H.J. (2013). Animal Geographies 1. *Progress in Human Geography*. vol. 38 no. 2 308-318
- Buller, H.J. (2014). Animal geographies II: Methods. *Progress in Human Geography*, (Online First) 0309132514527401–. doi:10.1177/0309132514527401
- Cammack, P. J., Convery, I. and Prince, H. (2011), Gardens and birdwatching: recreation, environmental management and human–nature interaction in an everyday location. *Area*, 43: 314–319
- Carvalho Reis, A. (2009) More than the kill: hunters' relationships with landscape and prey. *Current Issues in Tourism* 12(5) pp, 573 - 587.
- Cassidy, A. (2006). Evolutionary psychology as public science and boundary work. *Public Understanding of Science*, 15(2), 175–205.
- Cassidy, A., & Mills, B. (2012) "Fox Tots Attack Shock": Urban Foxes, Mass Media and Boundary-Breaching. *Environmental Communication: A Journal of Nature and Culture*, 6(4), 494–511.
- Clare, J. (unknown; 2004) *John Clare: Major Works*. E. Robinson & D. Powell. Oxford: Oxford University Press, pp246-7.
- Cole, L. (2014). Of Mice and Moisture: Rats, Witches, Miasma and Early Modern Theories of Contagion. *Journal for Early Modern Cultural Studies*, 10(2), 65–84.
- Corbett, J. B. (2006). *Communicating nature: how we create and understand environmental messages* (London: Island Press).
- Cosslett, T. (2006) *Talking animals in British children's fiction, 1786-1914* (Aldershot: Ashgate Publishing)
- Daily Telegraph (2001, March 21) The smart sett, *The Daily Telegraph*, p25
- Dann, C. (1979) *The Animals of Farthing Wood*. (London: Egmont Publishing)
- Daston, L., & Mitman, G. (2005). *Thinking With Animals: New Perspectives On Anthropomorphism*. Columbia University Press.

- David, P., Helden, V., Luise, A., Mu, B., Michel, A. L., Müller, B., & Van Helden, P. D. (2010). *Mycobacterium bovis* at the animal-human interface: a problem, or not? *Veterinary microbiology*, 140(3-4), 371–81.
- Davies, G. (2000) Science, observation and entertainment: competing visions of postwar British natural history television, 1946-1967. *Cultural Geographies* 7(4) pp. 432-460
- Defra (2010) Bovine tuberculosis: the government's approach to tackling the disease and consultation on a badger control policy.
<http://webarchive.nationalarchives.gov.uk/20130123162956/http://www.defra.gov.uk/corporate/consult/tb-control-measures/100915-tb-control-measures-condoc.pdf> accessed 01/12/10
 (London: Department for Environment, Food and Rural Affairs)
- Defra (2011) Bovine Tuberculosis: The Government's approach to tackling the disease and consultation on a badger control policy. Summary of Consultation Responses. Available online at <http://webarchive.nationalarchives.gov.uk/20120616115816/http://archive.defra.gov.uk/corporate/consult/tb-control-measures/bovinetb-summary-responses-110719.pdf>
 Accessed 01/12/14 (London: Department of Environment and Rural Affairs)
- Douglas, M. (1966) *Purity and danger: an analysis of concepts of pollution and taboo* (London: Routledge & Kegan Paul)
- Eliis, A. (1877, Oct 24) 'The Badger' (Letters To The Editor). *The Times Archive*, p5, issue 29081; col E.
- Ellis, S (2002; July 6) Tea for two, please. *The Times (Weekend)*, p6.
- Enticott, G. (2001) Calculating nature: the case of badgers, bovine tuberculosis and cattle. *Journal of Rural Studies* 17(2) pp. 149-164.
- Enticott, G. (2008). The spaces of biosecurity: prescribing and negotiating solutions to bovine tuberculosis. *Environment and Planning A*, 40(7), 1568-1582.
- Enticott, G. (2011a) The local universality of veterinary expertise and the geography of animal disease. *Transactions of the Institute of British Geographers*, 47(1): pp. 75-88.
- Enticott, G. (2011b) "Techniques of neutralising wildlife crime in rural England and Wales," *Journal of Rural Studies* 27, no. 2: 200-208.
- Farm Crisis Network (2009). *Stress and loss: a report on the impact of bovine TB on farming families*. Farm Crisis Network, Northampton. Available at: <http://www.tbfreeengland.co.uk/assets/4200> accessed 01/12/14
- Fitzgerald, S. D., & Kaneene, J. B. (2013). Wildlife reservoirs of bovine tuberculosis worldwide: hosts, pathology, surveillance, and control. *Veterinary Pathology*, 50(3), 488–99.
- Fissell, M. (1999) Imagining vermin in early modern England. *History Workshop Journal* 47(Spring) pp.1-29.
- Gerber D L J, Burton-Jeangros C, Dubied A. (2011) Animals in the media: new boundaries of risk? *Health, Risk & Society* 13(1): 17 - 30
- Goodwin, S (1997, Dec 1) Cull or cure dilemma as badgers get blame for epidemic. *The Independent*, p20.
- Grant, W. Intractable policy failure: the case of bovine TB and badgers. *The British Journal of Politics & International Relations* 11(4) pp. 557-573
- Griffiths, H. I. and D.H. Thomas (1997) *The conservation and management of the European badger (Meles meles)*. *Nature and Environment*, No. 90 (Strasbourg: Council of Europe Publishing)
- Grahame, K. (1908) *The Wind in the Willows* (London: Methuen)
- Grahame, K. and Branscombe, P. (1913) *The Wind in the Willows* (New York: C. Scribner's Sons). Retrieved from Project Gutenberg at: <http://www.gutenberg.org/files/27805/27805-h/27805-h.htm> on 01/12/14.
- Grahame, K. and Moore, I. (2009) *The Wind in the Willows (Walker Illustrated Classics)* London: Walker Books
- Grahame K. and Shepard, E.H. (1931) *The Wind in the Willows*. (London: Methuen)
- Griffin, E. (2007). *Blood sport: hunting in Britain since 1066*. Yale University Press.
- Guardian Leader (2007, May 15) Leading Article: in praise of... badgers. *The Guardian*, p28.

- Hall, M. and Cosgrove, B. (1984-7) *The Wind in the Willows (TV series)*. Manchester: Cosgrove Hall Productions
- Haraway, D. (2007) *When Species Meet*. (Minnesota: University of Minnesota Press)
- Hardy, P. (1975) *A lifetime of badgers* (Newton Abbot [etc.]: David and Charles)
- Hattersley, R. (2005, Dec 22) A cull by royal appointment. *The Times*, p18
- Hinsliff, G. (1998, Aug 18) Thousands of badgers are condemned to die over TB fears. *Daily Mail*, p21.
- Hytten, K. (2009) Dingo dualisms: Exploring the ambiguous identity of Australian dingoes. *Australian Zoologist*, 35(1): 18-27
- Independent Scientific Group on Cattle TB (2007) *Final Report of the Independent Scientific Group on Cattle TB*. London: Department of the Environment and Rural Affairs. Retrieved from: http://archive.defra.gov.uk/foodfarm/farmanimal/diseases/atoz/tb/isg/report/final_report.pdf on 01/12/14
- Jacques, B. (1988) *Mossflower*. (London: Hutchinson)
- Jenkins, S. (2004, Apr 4) A verminous Vietcong stalks the countryside. *The Times*, p24.
- Joffe, H. (1999) *Risk and the Other*. (Cambridge: Cambridge University Press).
- Joffe, H. (2011) Public apprehension of emerging infectious diseases: are changes afoot? *Public Understanding of Science* 20: 446-460
- Knight, J. (2000a) ed., *Natural Enemies : People-Wildlife Conflicts in Anthropological Perspective* (London: Routledge).
- Knight, J. (2000b) Introduction. pp1-36 in *Natural enemies: people-wildlife conflicts in anthropological perspective* (London: Routledge)
- Krebs, JR and the Independent Scientific Review Group (1997) *Bovine tuberculosis in cattle and badgers. Report to the Rt. Hon Dr. Jack Cunningham MP*. London: MAFF Publications.
- Lascelles, E. (1932, Aug 31) 'The Badger: Damage Caused in the Hunting Countries' Letter from Edward Lascelles. *The Times Archive* , p6 , I 46226,; col B.
- Law, J., & Lynch, M. (1988). Lists, Field Guides, and the Descriptive Organization of Seeing: Birdwatching as an Exemplary Observational Activity. *Human Studies*, 11(2), 271-303
- Leach, M., Scoones, I., & Stirling, A. (2010). Governing epidemics in an age of complexity: Narratives, politics and pathways to sustainability. *Global Environmental Change*, 20(3), 369–377.
- Lester, L. (2010) *Media and Environment: Conflict, Politics and the News*. (Cambridge: Polity)
- Lewis, C.S. (1951) *Prince Caspian: The Return to Narnia*. (London: Geoffrey Bles)
- Lodge, M., & Matus, K. (2014). Science, Badgers, Politics: Advocacy Coalitions and Policy Change in Bovine Tuberculosis Policy in Britain. *Policy Studies Journal*, 42(3), 367–390.
- Lorimer, J. (2007) Nonhuman charisma. *Environment and Planning D: Society and Space* 25 pp. 911-932
- Lovegrove, R. (2007) *Silent fields: the long decline of a nation's wildlife* (Oxford ; New York: Oxford University Press)
- Marcu, A., E. Lyons, and P. Hegarty (2007) Dilemmatic human-animal boundaries in Britain and Romania: post-materialist and materialist dehumanization. *British Journal of Social Psychology* 46(4) pp. 875-893.
- Marren, P. (1995) *The New Naturalists: Half a Century of British Natural History* (London: HarperCollins)
- Marvin, G. (2000) The problem of foxes: legitimate and illegitimate killing in the English countryside." Pp. 189-211 in *Natural Enemies: People-Wildlife Conflicts in Anthropological Perspective*, edited by John Knight. London: Routledge, 2000.
- Marvin G. (2001) Cultured killers: Creating and representing foxhounds. *Society and Animals* 9: 273-292
- Mavhunga, C. C. (2011). Vermin Beings: On Pestiferous Animals and Human Game. *Social Text*, 29(1), 151–176.
- May, B. (2010) *Save Me* (campaign website) www.save-me.org.uk last viewed 01/12/14

- Maye, D., Enticott, G., Naylor, R., Ilbery, B., & Kirwan, J. (2014). Animal disease and narratives of nature: Farmers' reactions to the neoliberal governance of bovine Tuberculosis. *Journal of Rural Studies*. doi:10.1016/j.jrurstud.2014.07.001
- Mitchell, S (2006, March 4) TB OR NOT TB? Badgers are on trial, accused of spreading tuberculosis. Before the jury is dismissed on Friday, Sandy Mitchell talks to both defence and prosecution. *Daily Telegraph(Weekend)*, p1.
- Molloy, C. (2011) *Popular Media and Animals*. (Palgrave Macmillan: Basingstoke)
- More, S. J. (2009) What is needed to eradicate bovine tuberculosis successfully: an Irish perspective. *Veterinary Journal* 180(3) pp. 275-278.
- Mort M, Convery I, Baxter J & Bailey C (2008) Animal Disease and Human Trauma: the psychosocial implications of the 2001 UK foot and mouth disease disaster, *Journal of Applied Animal Welfare Science*, 11(2), 133-148.
- Moss, S. (2004) *A bird in the bush: a social history of birdwatching* (London: Aurum)
- Muirhead R.H., Gallagher J. & Burn K. J. (1974). Tuberculosis in wild badgers in Gloucestershire: epidemiology. *Veterinary Record*, 95(24): 552-555.
- Neal, E. (1948) *The Badger [New Naturalist Monograph]*. (London: Collins)
- Neal, E. (1994) *The badger man: memoirs of a biologist* (Ely: Providence Press)
- Nerlich, B., Brown, B. and Wright, N. (2009) The Ins and Outs of Biosecurity: Bird 'flu in East Anglia and the Spatial Representation of Risk. *Sociologia Ruralis*, Vol. 49, No. 4: 344-359
- Nerlich, B. and James, R. (2009) "The post-antibiotic apocalypse" and the "war on superbugs": catastrophe discourse in microbiology, its rhetorical form and political function. *Public Understanding of Science* 18: 574-590
- Nelson, M. (1975) Old English riddle no. 15: "The badger": an early example of mock heroic. *Neophilologus* 59(3) pp. 447-50
- Nicholls, H. (2011) The art of conservation. *Nature*, 472(7343), 287-289.
- O'Connor, C. M., Haydon, D. T., & Kao, R. R. (2012). An ecological and comparative perspective on the control of bovine tuberculosis in Great Britain and the Republic of Ireland. *Preventive Veterinary Medicine*, 104(3-4), 185-197.
- O'Keefe, P. J. (2007). Introduction: Hunting as Heritage: Save a Whale, Harpoon a Makah? *International Journal of Cultural Property*, 14(03), 279-282.
- Perkins, A. (1999, Apr 12) Inside story: What have I done to deserve this?; The Government is about to launch a badger-culling campaign. But instead of solving a problem, it's likely to cause a new catastrophe in the countryside, says Anne Perkins. *The Guardian*, p8.
- Perkins, D. (2003) *Romanticism and animal rights (Cambridge Studies in Romanticism)* (Cambridge; New York: Cambridge University Press).
- Picking, J. (2003) *Badger Badger Badger*. [Web animation] <http://weebly-stuff.com/songs/badgers/>. Accessed 01/12/14.
- Picking, J., May, B. and Blessed, B. (2013) *Save The Badgers* [Web animation] <http://www.weebly-stuff.com/songs/Save+The+Badgers/> . Accessed on 01/12/14
- Political Scrapbook (2013) 'Best of the Badger: The 5 funniest responses to Paterson's own goal' *Political Scrapbook*. Retrieved from: <http://politicalscrapbook.net/2013/10/5-funniest-responses-to-badger-goalposts-gaffe/> on 01/12/14.
- Potts, A. (2009) Kiwis Against Possums: A Critical Analysis of Anti-Possum Rhetoric in Aotearoa New Zealand. *Society and Animals* 17: 1-20.
- Potter, B. (1912) *The Tale of Mr. Tod*. (London: Frederick Warne & Co.). Retrieved from Project Gutenberg at: <http://www.gutenberg.org/files/19805/19805-h/19805-h.htm>
- Potter, B., & Taylor, J. (2012). *Beatrix Potter's Letters* (ebook edition). Penguin Books Limited. Retrieved from <http://books.google.com/books?id=BvMuYoVIZugC&pgis=1> on 01/12/14
- Redpath, S. M., Bhatia, S., & Young, J. (2014). Tilting at wildlife: reconsidering human-wildlife conflict. *Oryx*, 1-4. DOI: <http://dx.doi.org/10.1017/S0030605314000799>

- Rees, A 'A place that answers questions: primatological field sites and the making of authentic observations', *Studies in the History and Philosophy of Science C*, 37 (2006) 311-333
- Roper, T.J. (2010) *Badger (The New Naturalist Library)* (London: Collins)
- Rowling, J.K. (1997) *Harry Potter and the Philosopher's Stone*. London: Bloomsbury.
- Ryan, T. J., P. G. Livingstone, D. S. L. Ramsey, G. W. de Lisle, G. Nugent, D. M. Collins and B. M. Buddle (2006) Advances in understanding disease epidemiology and implications for control and eradication of tuberculosis in livestock: The experience from New Zealand. *Veterinary Microbiology* 112 pp. 211–219.
- Schlich, T., Mykhalovskiy, E., & Rock, M. (2009). Animals in Surgery – Surgery in Animals: Nature and Culture in Animal-Human Relations and Modern Surgery. *History and Philosophy of the Life Sciences*, 31(3-4), 321–354.
- Scoones, T. (2009) *Springwatch, Episode 2, Predatory Badgers [TV Series]* Bristol: BBC Natural History Unit. Available online at: http://www.bbc.co.uk/nature/life/European_Badger#p007x3mn accessed on 01/12/14.
- Spencer, A. (2011) One Body of Evidence, Three Different Policies: Bovine Tuberculosis Policy in Britain. *Politics*, 31(2), 91-99.
- Spencer, M. (2010) Imagining badgers: an attempt at working with objects of governance. Conference paper circulated for *Sentient Creatures: Transforming biopolitics and life matters*, University of Oslo, 16-17th September 2010
- Stirling, A. (2008) 'Opening Up and Closing Down: power, participation and pluralism in the social appraisal of technology', *Science Technology and Human Values*, 33(2), 262-294.
- Strauss, A. and Corbin, J. (1998) *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory (2nd edition)*. Thousand Oaks, Calif.; London: Sage Publications.
- Syse, K. V. L. (2013). Otters as Symbols in the British Environmental Discourse. *Landscape Research*, 38(4), 540–552.
- Tasker, J. (2012, Sept 14) In the Hot Seat: Owen Paterson. *Farmer's Weekly Interactive* [Online] <http://www.fwi.co.uk/articles/14/09/2012/135217/in-the-hot-seat-owen-paterson.htm> accessed 01/12/14.
- The Times (1811, Apr 3) Easter Monday Sports. *The Times Archive*, p3, issue 8271; col C.
- The Times (1927, Apr 28) Men And Badgers (Editorial). *The Times Archive*, p 15, l 44567, col E.
- The Times (1999, May 5) Badger the government. *The Times*.
- Thomas, E. (1917) *Poems*. (London: Selwyn & Blount)
- Waddington, K. (2006) *The bovine scourge: meat, tuberculosis and public health* (Woodbridge: The Boydell Press)
- Washer, P. (2010). *Emerging infectious diseases and society*. Palgrave Macmillan.
- Weathers, H. (2003; June 3) Mother badgers are snared in rusty cages, parted from their screaming cubs and coldly shot in the head . . . all with the Government's blessing. *Daily Mail*, p11.
- White, T.H. (1938) *The Sword in the Stone* (New York: G. P. Putnam's Sons)
- White, P. C. L., & Ward, A. I. (2010). Interdisciplinary approaches for the management of existing and emerging human–wildlife conflicts. *Wildlife Research*, 37(8), 623.
- Wilkinson, K (2007) 'Evidence based policy and the politics of expertise: a case study of bovine TB' *CRE Discussion Paper*, 12 [Working paper] Retrieved from: <http://www.ncl.ac.uk/cre/publish/discussionpapers/pdfs/dp12%20Wilkinson.pdf> on 01/12/14
- Woods, M. (2000) Fantastic Mr. Fox? Representing animals in the hunting debate. Pp. 183-202 in C. Philo, and C. Wilbert, eds. *Animal spaces, beastly places: new geographies of human-animal interactions* (London: Routledge)
- Woods, M. (2008) Hunting: New Labour Success or New Labour Failure? Pp. 95-114 in M. Woods, ed. *New Labour's Countryside: Rural Policy in Britain since 1997* (Birmingham: The Policy Press)
- Veterinary Association for Wildlife Management (2010) *Badgers and Bovine TB* http://www.vet-wildlifemanagement.org.uk/index.php?option=com_content&task=view&id=14&Itemid=28 (accessed 26/11/2014)